

Claims

1. Toy vehicle (10, 200, 300, 400, 500, 600) for a motor-racing circuit (22) with guidance by tracks, which circuit (22) has a guiding groove (20) and conductor rails (24) adjacent to said groove (20), there being provided for the guidance by tracks a keel (18), which is pivotably arranged on the toy vehicle (100, 200, 300, 400, 500), for engagement in the guiding groove (20) in the motor-racing circuit (22), and there also being arranged on the toy vehicle (100, 200, 300, 400, 500) a magnetic device (32) which interacts with the conductor rails (24) on the motor-racing circuit (22), by means of magnetic attraction, in such a way that an additional retaining force holds the toy vehicle (100, 200, 300, 400, 500) in the track on the motor-racing circuit (22), characterised in that a swinging member (26) is pivotably fixed to the toy vehicle (100, 200, 300, 400, 500) at one end and the magnetic device (32) is arranged on the swinging member (32), at a distance from the pivotable fixing, the pivotable fixing being so designed that if there is drift by the toy vehicle (100, 200, 300, 400, 500) in the form of pivoting of a longitudinal axis (28) of the toy vehicle (100, 200, 300, 400, 500) relative to the motor-racing circuit (22), about the keel (18) of the toy vehicle (100, 200, 300, 400, 500) as a centre of rotation, the swinging member (26) pivots relative to the toy vehicle (100, 200, 300, 400, 500) in the opposite direction in such a way that the magnetic device remains adjacent to the conductor rails (24) on the motor-racing circuit (22), so that there is a magnetic force of attraction available between the magnetic device (32) and the conductor rails (14) even if drift occurs.

2. Toy vehicle (100, 200, 300, 400, 500) according to claim 1, characterised in that the magnetic device (32) is arranged at a free end of the swinging member (26) opposite from the pivotable fixing.

5

3. Toy vehicle (100, 200, 300, 400, 500) according to claim 1 or 2, characterised in that the magnetic device (32) has at least one permanent magnet.

10

4. Toy vehicle (600) according to at least one of the foregoing claims, characterised in that the swinging member (26) is divided between the pivotable fixing and a free end and has a pivot joint at that point.

15

5. Toy vehicle (600) according to claim 4, characterised in that part (48) of the swinging member (26) which is arranged on the side of the pivot joint (50) remote from the pivotable fixing of the swinging member (26) to the toy vehicle (600) carries the magnets (32) and

20

is guided on at least one guide rail (52).

25

6. Toy vehicle (600) according to claim 5, characterised in that the at least one guide rail (52) is of a straight form and the pivot joint (50) between the parts (46, 48) of the swinging member (26) has in addition a cam-and-follower connection (54, 56) in such a way that, when the swinging member (26) pivots relative to the toy vehicle (600), the two parts (46, 48) of the swinging member (26) perform, in addition, a translatory/pivoting

30

7. Toy vehicle (600) according to claim 5 or 6, characterised in that the at least one guide rail (52) is

of a form such that, when the swinging member (26) pivots relative to the toy vehicle (300) from a centre position in which the swinging member (26) is aligned substantially parallel to a longitudinal axis (28) of the toy vehicle (600), the magnetic device (32) performs a translatory movement in the direction of the motor-racing circuit (22).

8. Toy vehicle (600) according to at least one of claims 5 to 7, characterised in that a spring device (34) is provided which exerts a returning force on the part (48) carrying the magnets (32) towards a centre position of the swinging member (26) in which the swinging member (26) is aligned substantially parallel to a longitudinal axis of the toy vehicle (600).

15

9. Toy vehicle (200) according to at least one of the foregoing claims, characterised in that a spring device (34) is provided which exerts a returning force on the swinging member (26) towards a centre position of the swinging member (26) in which the swinging member (26) is aligned substantially parallel to a longitudinal axis (28) of the toy vehicle (200).

10. Toy vehicle (300) according to at least one of the foregoing claims, characterised in that the pivotable fixing has a guide rod (36) which guides the swinging member (26) in the latter's pivoting movement.

11. Toy vehicle (300) according to at least one of

substantially parallel to a longitudinal axis (28) of the toy vehicle (300), the magnetic device (32) performs a translatory movement towards the motor-racing circuit (22).

5 12. Toy vehicle (300) according to claims 10 and 11, characterised in that the guide rod (36) is designed to slope down towards the motor-racing circuit (22) from the centre position of the swinging member (26).

10 13. Toy vehicle (500) according to at least one of the foregoing claims, characterised in that a contact device (40) is provided which, when the swinging member (26) reaches a predetermined, and in particular maximum, angle of pivot relative to the toy vehicle (500), acts on a
15 traction current to a drive motor (14) of the toy vehicle (500).

14. Toy vehicle (500) according to claim 13, characterised in that the contact device has, on both sides
20 relative to the swinging member (26), mechanical contacts which abut physically at respective end positions of the swinging member (26) and trigger a contact for activating the contact device.

25 15. Toy vehicle (500) according to claims 13 or 14, characterised in that the mechanical contacts (40) are arranged on the swinging member (26) or on the vehicle (500).

30 16. Toy vehicle (500) according to at least one of claims 13 to 15, characterised in that the contact device (40) reduces or limits a traction current.

17. Toy vehicle (100, 200, 300, 500) according to at least one of the foregoing claims, characterised in that the swinging member (26) is connected to the keel (26) of the toy vehicle (100, 200, 300, 400, 500) to be solid in
5 rotation therewith.

18. Toy vehicle (400) according to at least one of claims 1 to 16, characterised in that the swinging member (26) is mounted to be pivotable independently of the keel
10 (18) and has in the region of the magnetic device a guide keel (38) which engages in the guiding groove (20) of the motor-racing circuit (22).